

## RACING ROUND THE CLOCK

**SYSTEM RACES IN 24 HOUR TRACK CONTESTS.**

**Planning Out Competition in Advance and Holding to the Schedule to the Letter Price High Speed Must Be Maintained. However, Throughout**

It isn't so easy to get cars and teams to compete in twenty-four hour races especially for the reason that unless the prizes are large this sort of competition doesn't appeal to the drivers. Driving in a twice round the clock event is hard, much harder in fact than road racing, and as the prizes in the big road events are much larger for these longer, and more trying contests, it is easy to see why the automobile drivers prefer "joy ride" on the road. That's the way it seems to them too when they contrast the road event to the long grind on a track.

There is a decided science to twenty-four hour racing, and when a company has worked out this science thoroughly it has a distinct advantage over its competitors. For instance, no matter how fast a car may be and no matter how great a head it may get in the early hours of a twenty-four hour race, it is just as likely as not to succumb to more steady rating by another machine. A car that is driven full speed and recklessly may get even as far as half the distance, but if it meets with mishap may be off long enough to lose all that lead and a great deal more.

In one of the twenty-four hour races one car established a lead of nearly twenty miles in the first half. Then it met with gaseous accident, and when the car returned to the track, another one had just been puching along steadily was out in front with a lead that could only be overcome by a hard sprint, which racked the car apart again.

Plodding is an unpardonable way of speaking. Any machine that wins a twenty-four hour race is the hard contested race to go pretty near a mile minute when it is running. That is to say in the course of a race it is likely to be off the track for a large amount of time because of tire trouble. The constant swinging around turns causes haywire with shoes and tubes. In entering the paddock to make these changes it is necessary to slow down, and all this time counts.

For instance, in the race the Lozier won in 1909 in the record figures for stock cars of 1,190 miles about two hours and twenty minutes were lost in fifty tire changes and slowing down to entering the paddock. In other words this car ran 1,193 miles in 21 hours 40 minutes. That is to say this car while under way averaged 55.2 miles an hour although on the face of things its average speed was 19.6 miles an hour.

Let us assume the Stearns car was making an American record of 1,253 miles for 24 hours. This was 52.2 miles an hour for the full time of the course. Actually, however, there probably were two hours anyway to be deducted from this time. In say twenty-two hours of driving this average would be fifty-seven miles an hour. Together with the record of stock cars and stock entries of 1,190 miles and doubtless have showed a mile a minute for the time the machine was on the track.

These figures are illuminating of what an automobile has to do to win a twenty-four hour race. It is a wonder that Edge was able to do what he did even on a large fine road. No man can run a car as fast as a wonder than an American car was able to cover 1,233 miles on a one mile dirt circuit. It takes a very strong machine to average fifty miles an hour of full running time on a circuit such as that at Brighton Beach and still be able to continue. Keeping this up for fully twenty-four hours gives an insight into what will be put on the parts of the machine and also what a strain it is on the drivers, who work in pairs.

No twenty-four hour race can be won without a system. In the early days of this sort of racing things were done in rather a haphazard fashion, and until the Lozier, with its team work, showed the importance of studying the driving and ahead, did the racing world realize the true figure on a scheme of action. The Lozier was the first to have a system of signals for the men to tell them where they were, and how close to a certain predetermined average speed an hour they had made.

For instance, the drivers were told in one race that 1,190 miles would qualify. They set out at that. To accomplish this, and to make that mile fifteen or "trims" signs displayed at the end of each hour. That is, they were informed by those if they were ahead or behind the scheduled miles an hour. Holding to that system, they plodged along and eventually caught the field. The last five hours they had the race in hand and finished with a total of 1,190 miles. That was four short of the scheduled distance, a palpable lapse in so long a stretch of time.

The great trouble the managers of twenty-four hour teams have is to keep the drivers from getting with the others in the contest, particularly at the beginning. It is very difficult to get a team to start these races, as some do that go out like lightning and run rings around the field. It takes more than speed to win one of these races, although the statistics prove that there is speed to be figured in too.

This last endurance race is very popular, and the record for the race made rank the fastest, and the race made rank the best, inside out of every automobile.

A man who has a number of these cars says, "Let me tell you that speed racing for twenty-four hours is a real test of endurance. I have seen many of these cars, and one of the best is the Benz. It takes more than speed to win one of these races, although the statistics prove that there is speed to be figured in too."

This last endurance race is very popular, and the record for the race made rank the fastest, and the race made rank the best, inside out of every automobile.

A man who has a number of these cars says, "Let me tell you that speed racing for twenty-four hours is a real test of endurance. I have seen many of these cars, and one of the best is the Benz. It takes more than speed to win one of these races, although the statistics prove that there is speed to be figured in too."

"With this fellow was good enough when he had his established a racing team to hold on to it, and he won without any trouble. A new system of running features was established in that way. In the race the Stearns won this car was ahead in the early part of the race was as at the end, and very likely was a parallel. But with the same speed of these cars will develop endurance enough to hold the car, and then history will be made for fast in this event. It will be the second time the British have won the race, and the third time the Americans have won the race.

But this has been said the drivers don't enjoy the twenty-four hour affairs. If a team was \$300 that means only \$75 apiece. As a good race meet a man is apt to win as much as the greatest deal of effort. Driving 200 miles in a track race is 200 miles on the road, and the cost of these long contests is enormous.

So that if the twenty-four hour race promoters are to get the season, hereafter they will probably have to raise the ante in a motorodrome with

10,000 folks to watch a race of the kind this could be done very easily no doubt. The sooner New York gets its motorodrome, wherever it is to be, the better for the interests this around the clock racing, and for the matter of that for all the track racing hereabout.

**LITTLE THINGS ABOUT CARS.**  
**How Types of Radiators, Brakes and Clutches Compare With Last Year's Use.**

The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The machines must be seen and carefully examined to be appreciated, but a little forecast of some of the things to be found may not be amiss.

In comparing the various exhibits we see that although water cooling has lost steam and air cooling, well known in connection with Karp, Verbiest, Marmon and Franklin cars, has gained very appreciably, radiators have not changed.

About the same proportion this year as last uses the cellular or honeycomb type. Nor does there seem to be any way of classifying the users. White, a maker of steam cars, and the Alco, built by locomotive makers, use it along with the Fuller, Interscience, Speedwell, Palmer-Singer, Simplex, Oakland, Ohio and others. At the other extreme is the Haynes, the second American to build gasoline cars, and the Locomobile, an early make of steam car Corbin and Knob, known by the air cooled cars, also used.

The big Chadwicks, Mathisons, Nationals, Packards, Pierces, Ringers, Royal-Tourists, join with the lighter Maxwell, Columbias, Jacksons, Marmons, Marques and Stoddard-Davisons in advocating this type.

Although few in number at present to go on the market, the use of the cellular type of radiator is not less representative.

The Winton, the second car on the American market, the Reo, Autocar, Cadillac and other early makers, the Buick, Cartercar, Envoy, Edide, Hudson, Imperial, Peerless, Pope-Hartford and Regal, on the two cycle Elmers and the friction drive Lamberts, make a list of the cellular type.

Baked bone has come into use, the shaft brake is slowly losing ground and the double rear brake is gaining. From 82 per cent last year to 73 net next year is the gain.

The use of the shaft brake is to be denied and its freedom from dirt is in its favor, while it is usually simpler than the disk, but rear break is the style.

In entering the paddocks to make these changes it is necessary to slow down, and all this time counts.

For instance, in the race the Lozier won in 1909 in the record figures for stock cars of 1,190 miles about two hours and twenty minutes were lost in fifty tire changes and slowing down to entering the paddock. In other words this car ran 1,193 miles in 21 hours 40 minutes.

That is to say this car while under way averaged 55.2 miles an hour although on the face of things its average speed was 19.6 miles an hour.

Let us assume the Stearns car was making an American record of 1,253 miles for 24 hours. This was 52.2 miles an hour for the full time of the course.

Actually, however, there probably were two hours anyway to be deducted from this time. In say twenty-two hours of driving this average would be fifty-seven miles an hour, which is about the same as the 1909 record.

The difference is that the 1909 record was set by the Lozier.

Clutches show more diversity than any other major feature. The early makers

used the chain clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

While the single clutch seems to have lost its ascendancy, it is still used.

The two cycle Elmers and the friction drive Lamberts make a list of the single clutch.

## NOTES OF THE MOTOR TRADE

### CARS AND THEIR MAKERS AND THEIR BUYERS.

**A New Ignition System to Be Shown.**  
**Cashier Has a Christmas Tree.**  
**The Stearns Construction for 1911.**  
**American Designer Speaks on Costs.**

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

At the Madison Square Garden show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."

It is impossible to tell briefly the many novelties and new wrinkles in construction. The public has become more motor wise, says Charles E. Duryea, technical correspondent for the A. L. A. M., discussing the show that will be held in Madison Square Garden from January 7 to 21. "Instead of noticing only the bodies, colors and equipment of cars, the visitors to the shows now kindly inspect and discuss the vital parts of the vehicles."